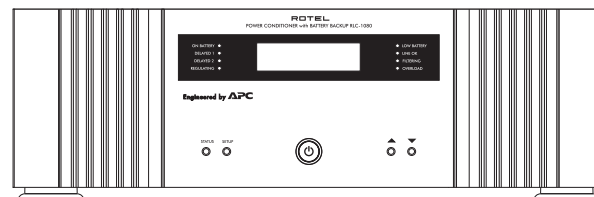


## Owner's Manual

# RLC-1080

## Power Conditioner



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## Important Safety Information

**WARNING: There are no user serviceable parts inside. Refer all servicing to qualified service personnel.**

**WARNING: To reduce the risk of fire or electric shock, be sure that the apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus. Do not use this product in an environment where the relative humidity may exceed 95% (non-condensing).**

**Do not allow foreign objects to get into the enclosure. If the unit is exposed to moisture, or a foreign object gets into the enclosure, immediately disconnect the power cord from the wall. Take the unit to a qualified service person for inspection and necessary repairs.**

Read all the instructions before connecting or operating the component. Keep this manual so you can refer to these safety instructions.

Heed all warnings and safety information in these instructions and on the product itself. Follow all operating instructions.

Unplug this device from the wall outlet before cleaning. Clean the enclosure only with a dry cloth or a vacuum cleaner. **Note:** A product that is meant for uninterrupted service and for some specific reason, such as the possibility of the loss of an authorization code for a cable TV converter, is not intended to be unplugged by the user for cleaning or any other purpose, may exclude the reference to unplugging this device.

**You must allow 10 cm or 4 inches of unobstructed clearance around the unit.** Do not place the unit on a bed, sofa, rug, or similar surface that could block the ventilation slots. If the component is placed in a bookcase or cabinet, there must be ventilation of the cabinet to allow proper cooling.

Keep the component away from radiators, heat registers, stoves, or any other appliance that produces heat.

The unit must be connected to a power supply only of the type and voltage specified on the rear panel of the unit. Do not use a plug adapter which defeats the ground pin of the AC plug.

Connect the component to the power outlet only with the supplied power supply cable or an exact equivalent. Do not modify the supplied cable in any way. Do not attempt to defeat grounding and/or polarization provisions. Do not use extension cords.

Do not route the power cord where it will be crushed, pinched, bent at severe angles, exposed to heat, or damaged in any way. Pay particular attention to the power cord at the plug and where it exits the back of the unit. After connecting other devices to this device, do not push the rear of the device up against any surface (wall or shelving unit), as this may create an undesired bend in the power cords which may break the wire strands of the cord.

Although this device provides protection against electrical surges, when connecting an outside antenna or cable system to devices connected to this device, ensure the antenna or cable system is grounded so as to provide additional protection against voltage surges and static charges in accordance with Section 810 of the National Electric Code, ANSI/NFPA No.70 (see illustration).

This device provides a grounding lug at the rear panel for grounding the device to an external Transient Voltage Surge Suppression (TVSS) device. Ensure this connection is made in accordance with the instructions provided by the TVSS device.

This device employs Metal Oxide Varistors (MOVs), and other circuitry to protect against lightning and other sources of voltage surges and sags. It is not necessary to turn this device or the devices connected to this device, off during a lightning storm.

Do not locate outside antenna systems near overhead power lines, or other electric light or power circuits, or where it may fall or otherwise come in contact with these power sources. Do not allow the ladder being used, or the antenna itself to come into contact with these power sources, as such contact may be fatal.

Do not overload the wall outlet where this device is being connected. Do not overload this device. Ensure the total load to this device does not exceed that which is listed in the Specifications section of this manual.

Inspect the line cords, telephone/data cords, or DSS/Cable TV coaxial cables connected to this device to ensure they remain fully pushed in or attached, and that they are not frayed or otherwise damaged.

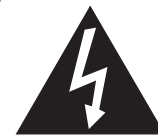
Immediately stop using the component and have it inspected and/or serviced by a qualified service agency if:

- The power supply cord or plug has been damaged.
- Objects have fallen or liquid has been spilled into the unit.
- The unit has been exposed to rain.
- The unit shows signs of improper operation
- The unit has been dropped or damaged in any way

Place the unit on a fixed, level surface strong enough to support its weight. Do not place it on a moveable cart that could tip over.



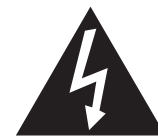
Rotel products are designed to comply with international directives on the Restriction of Hazardous Substances (RoHS) in electrical and electronic equipment and the disposal of Waste Electrical and Electronic Equipment (WEEE). The crossed wheeled bin symbol indicates compliance and that the products must be appropriately recycled or processed in accordance with these directives.



**CAUTION**  
**RISK OF ELECTRIC SHOCK**  
**DO NOT OPEN**



**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

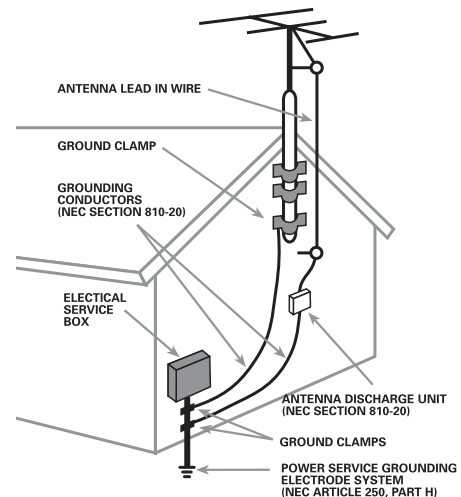


This symbol is to alert the user to the presence of uninsulated dangerous voltages inside the product's enclosure that may constitute a risk of electric shock.



This symbol is to alert the user to important operating and maintenance (service) instructions in this manual and literature accompanying the product.

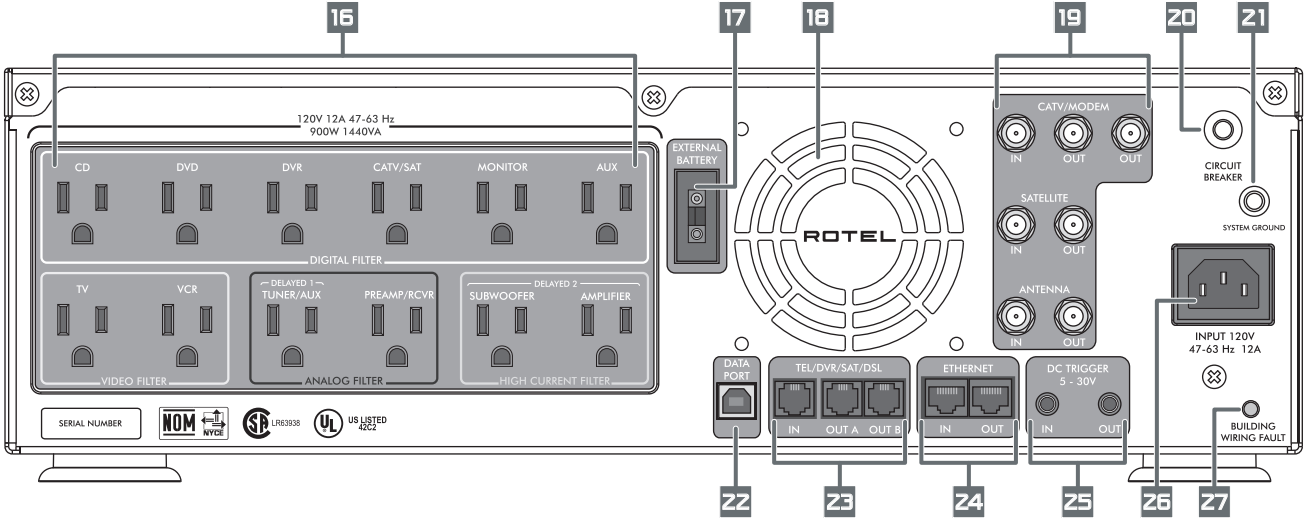
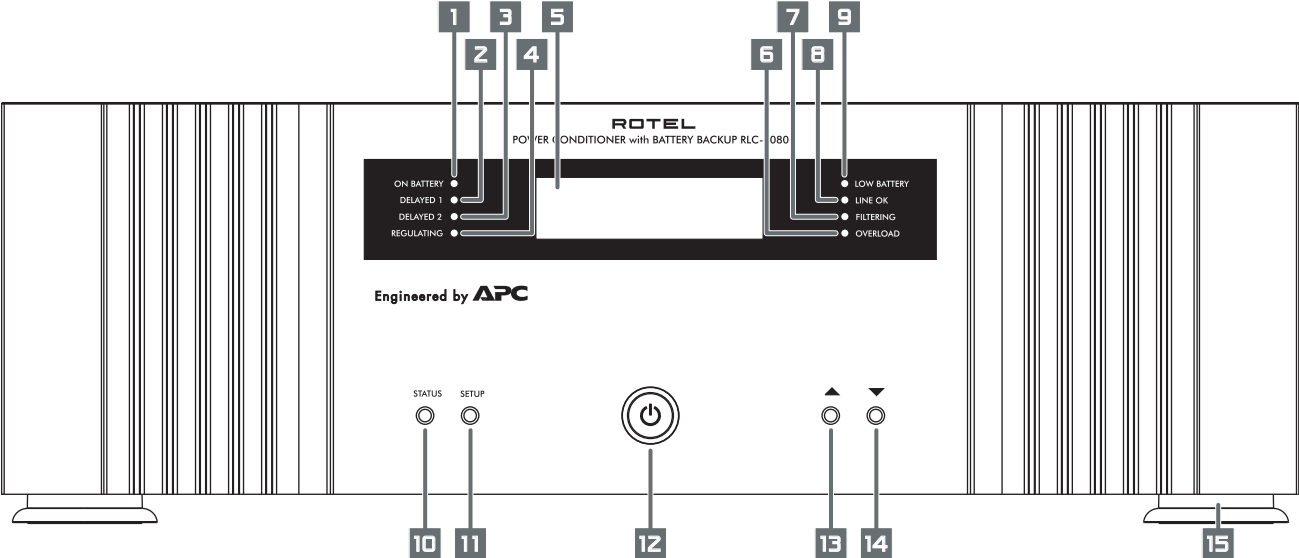
NATIONAL ELECTRICAL CODE INSTRUCTIONS  
SECTION 810: "RADIO AND TELEVISION EQUIPMENT"



### Federal Communications Commission (FCC) Compliance Information

This device complies with Part 68 and Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device must not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. As required, the bottom of this equipment contains, among other information, the Registration Number and Ringer Equivalence Number (REN) for this equipment. If requested, this information must be provided to the telephone company.

Front and Rear Panel Controls and Connections



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## About Rotel

A family whose passionate interest in music led them to manufacture high fidelity components of uncompromising quality founded Rotel over 45 years ago. Over the years that passion has remained undiminished and the goal of providing exceptional value for audiophiles and music lovers regardless of their budget, is shared by all Rotel employees.

Rotel's reputation for excellence has been earned through hundreds of good reviews and awards from the most respected reviewers in the industry, who listen to music every day. Their comments keep the company true to its goal – the pursuit of equipment that is musical, reliable and affordable.

All of us at Rotel thank you for buying this product and hope it will bring you many hours of enjoyment.

## Getting Started

Thank you for purchasing the Rotel RLC-1080 Power Conditioner. When used in a high-quality music or home theater system, your Rotel power conditioner will protect your high performance audio and video components from damaging power surges, spikes and lightning, as well as power outages. Protection is guaranteed. Isolated noise filter banks and automatic voltage regulation will eliminate power as a source of audio and video signal degradation. Pure sine wave battery backup power will prevent interruptions, lost pre-sets, missed DVR recordings and lost media server data when the power goes out. Data-line surge protection jacks will stop surges traveling over phone or data lines.

Digital satellite system, cable modem, and CATV coaxial cable lines are equally protected. With the RLC-1080 you can enjoy your home theater experience with the peace of mind that performance is optimized and protection is guaranteed.

## Features

- **Pure Sine Wave Battery Backup** - The RLC-1080 provides battery backup power to maintain pure, uninterrupted power for your home theater and automation systems in the event of a power blackout. Battery backup power not only prevents interruptions in your entertainment, it also prevents lost pre-sets, lost multi-media server data, damaged hard drives, and premature projector bulb wear and tear.
- **Automatic Voltage Regulation (AVR)** - The RLC-1080 is unique in that it provides automatic voltage regulation, which is engaged to correct low and high voltage conditions. All equipment connected to the RLC-1080 is protected against these undesired voltage fluctuations, thus prolonging the life of the equipment. Low voltage conditions can also negatively impact video quality. Consequently this feature may help improve picture quality if power line voltage is low.
- **Surge Protection** - The RLC-1080 provides guaranteed protection against damaging surges, spikes and even lightning. It not only provides protection from surges from AC power lines, it also protects against surges from system data lines including COAX, telephone and Ethernet lines. With the RLC-1080 all your equipment is protected.
- **Isolated Noise Filter Banks** - The RLC-1080 eliminates electromagnetic and radio frequency interference (EMI/RFI) that, when severe enough, can negatively impact sound and video quality. Each filter bank is electrically isolated from each other to prevent noise generated by one component from polluting other connected components. This noise filtering lets your system perform to its maximum capabilities.

- **DC Trigger** - When connected to a component that provides a DC trigger, that component controls the turning on and off, as well as sequencing of the 'delayed' outlet banks. The RLC-1080 also allows that DC signal to pass through to another connected component.
- **Rack-mountable** - Rack-mount hardware is included to mount the unit into any 4-post, 19" rack.
- **Sequenced Turn ON/OFF** - This feature ensures that connected equipment is powered-up/down in the proper order and with the right amount of delay between the stages. It allows the user to program a delay into the sequence of from 0 to 10 seconds. This delay eliminates transients that can affect connected components or cause the building circuit breaker to trip.

## Parts List

The RLC-1080 Power Conditioner includes the parts listed below. If any items are missing, please contact your authorized Rotel dealer.

- 1 Power Conditioner with Battery Backup (battery pack included)
- 1 Front Display Panel (Bezel)
- 1 Input Power Cord
- 3 Coaxial Patch Cables
- 1 DC Trigger Cable
- 1 PowerChute Personal Edition Software CD
- 1 USB Interface Cable
- 1 Telephone Patch Cable
- 1 Ethernet Patch Cable
- 1 User Manual
- 1 Equipment Protection Policy Sheet
- 1 Warranty Card
- 1 Rack-mount Kit (2 rails, 2 ear brackets, screws, and instruction sheet)

## A Few Precautions

Please read this manual carefully. In addition to installation and operating instructions, it also provides important safety information. It is very important that you have read and understand all of the safety information located at the front of this manual. If you have any questions about the safety information, or are concerned that your home may not be properly wired for this equipment, please contact a qualified and licensed electrician. Please contact your authorized Rotel dealer for answers to any questions you might have. In addition, all of us at Rotel welcome your questions and comments.

Save the RLC-1080 shipping carton and packing material for future use. Shipping or moving the RLC-1080 in anything other than the original packing material may result in severe damage.

Be sure to keep the original sales receipt. It is your best record of the date of purchase, which you will need in the event warranty service is ever required.

## Power Capacity

The RLC-1080 Power Conditioner is rated for 900 watts (continuous). It has been designed, however, to support current surges that are much higher than its continuous power rating. The RLC-1080 is capable of supplying the dynamic peak current draws required by any component designed to work on a 15 amp circuit. Despite their nameplate power ratings, high performance A/V equipment draw much less than their listed power ratings. The RLC-1080 can inform the user how much of the power capacity is available as equipment is connected to the unit.

## Placement

The RLC-1080 is quite heavy. Keep this in mind when selecting an installation location. Make sure that the shelf or cabinet can support its weight.

Proper installation of your new Power Conditioner is important. If the unit is being mounted in a standard 19" rack, refer to the instruction sheet provided in the box containing the slide rails.



## Front Panel

See the illustration on page 3.

### ON BATTERY Status Indicator **1**

When lit (orange), the RLC-1080 is operating on power from the internal Battery Pack. The unit will go "On Battery" when the voltage from the wall outlet has either dropped below or gone above the user-selected levels, during a power outage, or during momentary power drops or surges.

### DELAYED 1 Status Indicator **2**

When lit (blue), conditioned power is being supplied to equipment connected to the rear-panel outlets marked **Delayed 1**.

### DELAYED 2 Status Indicator **3**

When lit (blue), conditioned power is being supplied to equipment connected to the rear-panel outlets marked **Delayed 2**.

### REGULATING Status Indicator **4**

When lit (blue), this indicates that the Automatic Voltage Regulation (AVR) system is engaged to correct low or high voltage conditions.

### Vacuum Fluorescent Display **5**

The Vacuum Fluorescent Display (VFD) provides information about the unit and power status. It is also used to display information when making changes to the user-selectable settings for the unit.

**Note** - The VFD and Light Emitting Diodes (LEDs) can be dimmed or turned off independently of each other via the front control panel **SETUP** push button.

### OVERLOAD Status Indicator **6**

When lit (red) this indicates that the unit is overloaded; unplug some of the equipment connected to the unit until the indicator is no longer lit.

### FILTERING Status Indicator **7**

When lit, this notifies the user that the Electromagnetic Interference/Radio Frequency Interference (EMI/RFI) noise reduction circuit is active.

### LINE OK Status Indicator **8**

When lit, this indicates that the voltage from the wall outlet is within acceptable range. If this indicator is not lit, the Automatic Voltage Regulation circuit is active and is correcting high or low voltage levels to maintain safe voltage conditions for the connected components, or the unit is operating on battery power due to a power outage or extreme voltage level conditions.

### LOW BATTERY Status Indicator **9**

When lit (orange) this indicates the Battery Pack charge level is low. This should occur only after the RLC-1080 has been running on battery power for a period of time. The user can set the unit so this indicator will come on when the amount of time the system can continue to run on battery power is from 2 to 25 minutes. When lit, leave the unit plugged in to allow batteries to recharge. The unit does not have to be powered on for batteries to recharge.

### STATUS Button **10**

Using this button you can show the following information in the Display:

- Input and Output Voltage,
- Input and Output Frequency
- Telephone and Internet contact information
- Model and Serial Number
- Firmware (FW) Version number
- Source (Standby, Battery, or Utility) and Estimated Runtime
- Estimated Runtime with a Fuel Percentage bar graph
- System Load (in watts), and a Load Percentage bar graph.

This push button can also be used to set a default screen, that is, the screen that is normally displayed unless another screen is being viewed.

### SETUP Button **11**

This button is used to advance the display through the various user-selectable set up functions such as: **Audible Alarms, Sensitivity, Display Dimmer, LED Dimmer, Go To Bat If, Outlet 1 & 2 Delay** (in seconds), **Low Bat Warning, Bat Rep Date**, etc.

### On/Off Switch **12**

Controls power to all 12 outlets. We recommend the unit be left "on" at all times. Control power to your system and components using their own controls as you normally would.

### Up and Down Arrow Buttons **13 14**

These buttons are used to change parameters (increase, decrease or turn on or off) the various user-selectable settings such as: **Audible Alarms, Sensitivity, Display Dimmer, LED Dimmer, Go To Bat If, Outlet 1 & 2 Delay** (in seconds), **Low Bat Warning, Bat Rep Date**, etc.

### Removable Support Feet **15**

Feet can be unscrewed and removed to save space when rack mounting.

## Rear Panel

See the illustration on page 3.

### AC-Power Outlets <sup>16</sup>

The RLC-1080 Power Conditioner provides for connection of up to twelve (12) components. The outlets are arranged according to the type of filtering protection provided for a given component type. These Isolated Noise Filter Banks (INFBs) eliminate EMI and RFI that can negatively impact sound and video quality. You should plug your components into the recommended outlets to achieve optimum protection for your equipment.

**Note:** All outlets provide surge protection, voltage protection, noise filtering and pure sine wave battery backup power.

**DIGITAL FILTER Outlets** eliminate noise interference for Digital Components (CD, DVD, DVR, CATV/SAT, Flat Panel Monitors, Hi-Def tuners, etc.).

**Note:** Any digital device can be plugged into the **DIGITAL FILTER** outlets, any video device can be plugged into either of the **VIDEO FILTER** outlets, etc. For example, if you have a cable box and a satellite receiver, but no monitor, you can plug the cable box into the **"CATV/SAT"** outlet, and the satellite receiver into the **"Monitor"** outlet.

**VIDEO FILTER Outlets** provide filtering for video devices (**TV** and **VCR**).

**ANALOG FILTER Outlets** provides filtering for analog-based equipment (**TUNER/AUX** and **Preamp/Receiver**).

**HIGH CURRENT FILTER Outlets** provide filtering for high-current devices (**SUBWOOFER** and **AMPLIFIER**).

### EXTERNAL BATTERY Connector <sup>17</sup>

This provides a connection for the optional Extended Battery Pack. Ask your Rotel dealer for additional information.

### Cooling Fan <sup>18</sup>

The RLC-1080 has a micro-processor controlled, ultra-quiet cooling fan, which keeps the unit cool when operating on battery power.

### Surge Protected COAX/RF Connectors <sup>19</sup>

The surge protection feature prevents surges traveling over coaxial data lines from damaging the system. Connect the coaxial cable from the CATV or Cable Modem provider to the connector marked **"IN"**, connect other cables from the connectors marked **"OUT"** to the device(s) being protected (CATV box or Cable Modem). The RLC-1080 has an internal cable splitter so a single cable input can provide a signal to two components.

The RLC-1080 also provides the same surge protection for your satellite or RF antenna system. Connect the coaxial cable from the satellite or antenna system to the connector marked **"IN"**, connect another coaxial cable from the connector marked **"OUT"** to the device being protected.

### CIRCUIT BREAKER <sup>20</sup>

This "press-to-reset" Circuit Breaker may be "tripped" when there is a power line electrical surge or when the unit is overloaded. If such conditions occur the circuit breaker button pops out and shuts down output power to the outlets. To reset the Circuit Breaker simply push the button in.

**Caution:** When resetting the Circuit Breaker, push the button in quickly and release it. **Do not hold the Circuit Breaker button in.** Doing so may result in equipment damage.

### SYSTEM GROUND Screw <sup>21</sup>

Provides for the connection of grounding wires from all of your equipment. Grounding all your equipment to a single terminal prevents "ground loop" problems that can cause an audible "hum" to be heard through the speakers.

### DATA PORT Jack (USB) <sup>22</sup>

This port lets the RLC-1080 communicate with the included PowerChute Personal Edition software. If the RLC-1080 is also protecting a home computer, the software will automatically save files and properly shutdown the operating system if the unit about to shutdown due to a low battery condition. For more information regarding the installation and use of this software, see the documentation contained on the PowerChute Personal Edition CD.

### Surge Protected Telephone Jacks (TEL/DVR/SAT/DSL) <sup>23</sup>

The RLC-1080 has a telephone line splitter (2-line 4-wire with splitter) with surge protection for components connected via telephone line. Connect the supplied RJ11 Telephone cable from the wall jack (source) to the telephone line connector marked **"IN"**. Connect the telephone cables from the equipment to be protected (Telephone, DVR, DSS, or DSL) to the connectors marked **"OUT A"** and **"OUT B"**.

### ETHERNET Surge Protected Jacks <sup>24</sup>

The RLC-1080 protects a device connected to a home network from surges traveling over Ethernet network data lines. Connect the supplied RJ-45 Cable from the wall jack (source) to the connector marked **"IN"**. Connect another network cable from the connector marked **"OUT"** to the network equipment to be protected.

### DC TRIGGER Jacks <sup>25</sup>

These jacks provide for the connection of a component acting as a DC trigger, which controls turn on/off, as well as sequencing of the **"DE-LAYED 1"** and **"DE-LAYED 2"** outlet banks. The RLC-1080 also allows that DC signal to pass through to another connected component.

**Caution:** When making connections to the DC Trigger jacks, connect the source of the DC Trigger to the IN jack. The OUT jack should be used only as a pass-through. The DC Trigger signal can be short circuited if the input and output cables are reversed.

The maximum input voltage for the DC Trigger is 30VDC. Do not apply an AC voltage to the DC Trigger jacks. **Failure to comply with this statement may result in equipment damage.**

### Input Power Connector <sup>26</sup>

Provides for connection of the supplied AC power cord to the RLC-1080. Connect the other end to a normal AC power outlet (15 Amp, 120 VAC, 50-60 Hz).

### BUILDING WIRING FAULT Indicator <sup>27</sup>

If this indicator is lit, one of three wiring problems exists in the building wiring circuit: missing ground, overloaded neutral, or reversed polarity. An electrician should be consulted to resolve the problem.

## Installation

### Placement

**Caution:** The RLC-1080 weighs approximately 60 pounds. Two-people should work together when the unit is being moved. Lift the RLC-1080 carefully by firmly grasping both sides of unit in the middle. **Failure to use caution and proper procedures when lifting or moving the unit may result in personal injury and/or equipment damage.**

Place unit on a solid, flat surface that is capable of supporting at least 60 lbs.

**Note:** Avoid placing other components directly on top of or behind the unit. Leave at least one inch of space on all sides to allow for proper air ventilation. Do not block the fan.

### Rack Mounting

The RLC-1080 can be mounted in a standard 19" rack. Rack-mounting hardware is provided.

1. Install the rack-mount rails. (See the installation sheet located in the box containing the rack-mount rails.)
2. Install the rail cleats. (See the installation sheet located with the cleats in the box marked "Accessories.")
3. Install rack-mount ears. (OPTIONAL — See the installation sheet located with the cleats in the box marked "Accessories.") **Note:** Rack-mount ears are not required. Their only function is to fasten the unit to the front of the rack and prevent front-to-rear movement.

**Caution:** Rack-mount ears should **NEVER** be used alone to support the unit. Rack-mount rails must always be used to support the unit's weight when rack-mounting.

4. Slide the unit into the rack so that the cleats mounted on the side of the unit fit within the track of the rack-mount rails. If the ears were mounted, screw the mounted ears into the rack to lock unit into position. (See the installation sheet located in the box marked, "Accessories.")

**Note:** Avoid placing other components directly on top of or behind the unit. Leave at least one inch of space on all sides to allow for proper air ventilation. Do not block the fan.

## Connecting the Battery

The RLC-1080 is shipped with front bezel of the unit unattached and with the internal battery pack disconnected.

Connect the internal battery pack and attach the front bezel as follows:

1. Remove the battery retaining bar.
2. Push the Battery Wire Connector into the hole located at the left of the Battery Pack. Check to be sure that the connector is securely connected by gently pulling on the wire to see if it is attached to the connector.



3. Install the battery retaining bar.
4. Install the front Bezel by aligning the four pins located on the back-side of the Bezel to the holes at the left and right sides of the unit. Gently push the front Bezel onto the unit.

## System Test

Before connecting equipment to the RLC-1080 perform a System Test to be sure that the unit is functioning properly. Connect the AC Power Cord to the rear panel. Press the front panel power switch. Once power is applied to the unit, the display shows the following screen.

```
ROTEL - ENGINEERED
BY APC
```

This screen is displayed for a short period of time. It is followed by other screens that show model information, outlet delay operation, battery self-test with results and external battery presence. Finally, the preceding screen is displayed.

**Firmware Version screen** shows the version of the firmware that is installed in the unit. (**Note:** The screen on your unit may appear different from the one illustrated below, depending on the firmware version.)

```
FW VERSION:816.u1 .D
```

**DELAYED OUTLET1: ON; DELAYED OUTLET1: OFF screen** shows that power is available to the device (Tuner or Auxiliary component) that is connected to the rear-panel outlet marked **Delayed 1**.

It also shows that power is not yet available to the devices that are connected to rear-panel outlets marked **Delayed 2** (Subwoofer and/or Amplifier). Power to **Delayed 2** devices will be available after the factory preset delay (5 seconds) has elapsed. See the *Setting Up the RLC-1080* section of this manual to change the delay period. Once power is available for **Delayed 2** devices, the screen will change to **DELAYED OUTLET2:ON**.

```
DELAYED OUTLET1:ON
DELAYED OUTLET2:OFF
```



**SELFTEST IS ON; ON-LINE SELFTEST screen** shows that an On-Line Selftest is active.

```
SELFTEST IS ON
ON-LINE SELFTEST
```

**SELFTEST IS ON; ON-BATTERY SELF-TEST screen** shows that an **On-Battery Selftest** is active with the unit internally switched to power from the internal battery pack, which should already be connected within the unit. The **On Battery** LED is also lit during this test.

```
SELFTEST IS ON
ON-BATTERY SELFTEST
```

The unit will also test to see if an optional external battery pack is connected to the unit. If no external battery pack is connected to the unit **NO EXTERNAL BATTERY CONNECTED** will be displayed.

```
NO EXTERNAL BATTERY
CONNECTED
```

**SELFTEST RESULT; SELFTEST HAS PASSED screen** shows that the Selftest ran successfully to completion. If the message **TEST HAS FAILED** is displayed, please contact APC Technical Support.

```
SELFTEST RESULT:
TEST HAS PASSED
```

## Status Screens

### Status Screens

The most important status screens available after the **Selftest** has completed are:

- Input Voltage: XXXV;  
Output Voltage: XXXV
- System Load: <XXXW; Load: <XXX%
- Estimated Runtime: XHrs; Fuel: XXX%

### INPUT VOLTAGE: XXXV OUTPUT VOLTAGE: XXXV

This screen shows the input voltage from the wall power outlet and the voltage being supplied to the connected devices.

```
INPUT VOLTAGE: 121V
OUTPUT VOLTAGE: 120V
```

**Note:** As the screen above shows, at times, the voltage values on this screen may not match. This may be due to the fact that separate circuits are used to make these voltage measurements, and there is a time delay between the two circuits for updating this status screen. This condition is normal. Also, the voltage values may not match if the AVR is active.

### SYSTEM LOAD: <XXXW LOAD: <XXX%

This screen shows the power load of the connected equipment in watts, as well as a percentage of the total allowable load connected to the unit. Loads less than 5% of the rated power (50 watts) are displayed as < 5%.

```
SYSTEM LOAD: <45W
LOAD: <5% ██████████
```

### EST. RUNTIME: XHRS FUEL: XXX%

This screen shows the **Estimated Runtime** (in hours), as well as the Fuel capacity of the internal battery pack (as a percentage) based on the total load connected to the device. If the **Estimated Runtime** is less than one hour it is shown in minutes.

```
EST. RUNTIME: 5HRS
FUEL: 100% ██████████
```

## Information Screens

Another group of screens provide information about the RLC-1080. These screens are accessed by using the **STATUS** push button:

- Source: XXXXXXX screen
- FW Version: XXXXXXX screen
- Model Number and Serial Number screen
- Internet Address screen
- Input Frequency; Output Frequency screen

### SOURCE: XXXXXXX EST. RUNTIME: XHRS Screen

This screen shows the power source the unit is using to provide power (**UTILITY** or **BATTERY**) or if it is in **STANDBY** mode. It also displays the **Estimated Runtime** (in hours) based on the power source and connected equipment load. In **Standby** mode, the unit does not provide an output to the rear panel outlets.

**Note:** Whenever the RLC-1080 is connected to a “live” wall power outlet, the electronics inside are active. If the front panel **Power Switch** is turned off, the unit goes into **Standby** mode and shuts off power to the rear-panel outlets, but the display remains active.

```
SOURCE: UTILITY
EST. RUNTIME: 5HRS
```

### Firmware Version: XXXXXXX Screen

This screen provides information about which version of the firmware is loaded in to the unit. Please have this information available any time you need to talk with Rotel Technical Support.

```
FW VERSION: 816.u0c.D
```

### Model Number and Serial Number Screen

This screen displays the model number and serial number of your unit. Please have this information available any time you need to talk with Rotel Technical Support, as well.

```
MODEL #: RLC1080
S/N: PB060618619
```

### Internet Address Screen

This screen provides the world-wide Internet Web address for Rotel.

```
WWW.ROTEL.COM
```

### INPUT FREQUENCY; OUTPUT FREQUENCY Screen

This screen shows the AC line frequency of the power coming from the wall power outlet and the AC line frequency of the power being supplied to the connected devices.

```
INPUT FREQ: 60HZ
OUTPUT FREQ: 60HZ
```

At times, the frequency values on this screen may not match. This is due to the fact that separate circuits are used to make frequency measurements, and there is a time delay between the two circuits for updating this status screen. This condition is normal.

**Note:** The display will revert to the default SOURCE; EST RUNTIME screen after about 30 seconds of inactivity. The default screen can be changed. See the "Setting the Default Screen" section of this manual.

## Connecting the Components

**WARNING:** Do not make telephone, cable, Ethernet, antenna, electrical, or ground system connections during a lightning storm. Failure to comply may result in personal injury or death.

The RLC-1080 has four groups of power outlets. Each group has specialized filtering and surge protection that are specifically designed for certain type of components. It is recommended that you connect your A/V components to the power outlets that are designed for that type of unit. For more information see the *AC Power Outlets* section of this manual.

Connect the ground connector of each component in the system to the **SYSTEM GROUND** terminal on the RLC-1080. This will eliminate "ground loops" thus prevent the audible hum that they might otherwise produce.

## Setting Up the RLC-1080

Using the front panel **SETUP** and **Arrow Up/Down** buttons, you can configure or turn on/off, various functions of the RLC-1080. Pressing the **SETUP** push button will display these functions in the following order:

1. Audible Alarm
2. Sensitivity, Display Dimmer
3. LED Dimmer
4. Go To Battery If <XX Volts,  
Go To Battery if >XX Volts
5. Outlet Delay1
6. Outlet Delay2
7. Low Battery Warning
8. Battery Replacement Date
9. Do Quick Selftest
10. Do Runtime Calculation
11. Display Beep Test
12. Screen Saver On/Off, or Reset to Default

### AUDIBLE ALARM Setting

When set to **ON** this provides an audible tone whenever the unit detects a problem with itself, or with an externally connected battery pack. In the OFF setting, the audible tone is silenced.

```
AUDIBLE ALARM: ON
PRESS ↓↑ TO CHANGE
```

### SENSITIVITY Setting

Press the **SETUP** button to advance to the Sensitivity function. This feature adjusts how the RLC-1080 reacts to abnormal power input voltage or momentary power fluctuations. It allows you to adjust the sensitivity to **LOW**, **MEDIUM** or **HIGH** using the **SETUP** and **Up/Down Arrow** buttons. The Sensitivity adjustments have the following values:

**HIGH Sensitivity** – should be used when the connected equipment is sensitive to momentary low voltage or brief power fluctuations. In **HIGH Sensitivity** the unit is very sensitive to voltage distortion and is, therefore, more likely to switch back and forth to battery power than it would under a **MEDIUM** or **LOW** sensitivity setting.

**MEDIUM Sensitivity** – is the default setting suitable for most situations.

**LOW Sensitivity** – should be used when the RLC-1080 frequently switches to the internal battery power source even though the input voltage appears normal. Example: If the unit goes **ON BATTERY** when your power amplifier is turned on.

```
SENSITIVITY:HIGH
PRESS ↓↑ TO CHANGE
```

#### DISPLAY DIMMER Setting

This lets you set the brightness level of the VFD to **HIGH**, **LOW**, or **OFF**. Use the **SETUP** button to advance to the Display Dimmer screen. Once the display is shown, pressing the **Up/Down Arrow** buttons changes the brightness of the display. Once the Display brightness is at the desired level, press the **SETUP** push button to store the setting.

```
DISPLAY DIMMER:HIGH
PRESS ↓↑ TO CHANGE
```

**Note:** Even when the display dimmer is set to **OFF**, the screen will turn back on momentarily when there is a significant change in system status, such as a power outage or a low battery condition.

#### LED DIMMER Setting

This lets you set a brightness level of the front-panel light emitting diode (LED) indicators to **HIGH**,

**LOW**, or **OFF**. Use the **SETUP** button to advance to the LED DIMMER screen (not shown). Once the display is shown, press the **Up/Down Arrow** buttons to set the brightness of the LEDs. Once the LED brightness is at the desired level, press the **SETUP** push button to store the setting.

#### GO TO BATTERY IF > XXXV Setting

This lets you set a high voltage threshold for the unit. If the power input voltage goes up to the level set on this display screen, the RLC-1080 switches to Internal Battery power. The input voltage when this happens can be set from **134** to **144** volts.

```
GO TO BAT IF > 144V
PRESS ↓↑ TO CHANGE
```

#### GO TO BATTERY IF < XXXV Setting

(Display example not shown.) This lets you set a low voltage threshold for the unit. If the power input voltage goes down to the level set on this display screen, the RLC-1080 switches to Internal Battery power. The input voltage when this happens can be set from **90** to **100** volts.

#### OUTLET DELAY1 and OUTLET DELAY2 Setting

(Only the Outlet Delay1 display screen is shown) This lets you set the amount of time that elapses (from **0** to **10** seconds) before the RLC-1080 provides power to the rear panel outlets marked **Delayed1 (TUNER/AUX)** and **Delayed2 (SUBWOOFER and/or AMPLIFIER)**. By setting this delay, it prevents power on or power off glitches from affecting other equipment connected to the unit.

```
OUTLET DELAY1:5SEC
PRESS ↓↑ TO CHANGE
```

#### LOWBATWARNING: XMIN Setting

This lets you set the unit to sound an alarm when the RLC-1080 is running on battery power and available power from the Battery Pack drops to or below the setting (**2** to **25** minutes). For example, if this warning is set to three minutes, and the RLC-1080 is running on battery power, the alarm sounds when the power remaining in the Battery Pack can power the system for only three more minutes. This gives you time to turn off the components of the system before the Battery Pack is depleted.

```
LOWBATWARNING:3MIN
PRESS ↓↑ TO CHANGE
```

#### BATREPDATE: XX/XX/XX Setting

This lets you store the exact date a replacement Battery Pack is installed in the unit. After using the **Setup** button to access this screen, use the **Up/Down Arrow** buttons to set the correct month, then press the **SETUP** push button to move the cursor to the day of the month field. Set the day of the month using the **Up/Down Arrow** buttons. Press the **SETUP** button again to move the cursor to the year field, then set the year using the **Up/Down Arrow** buttons.

```
BATREPDATE:12/17/05
PRESS ↓↑ TO CHANGE
```

#### DO QUIK SELFTEST Screen

This lets you manually initiate a self-test to see that the battery pack is in good condition and that the unit is operating properly. **Note:** Once you advance to this screen, press either **Up/Down Arrow** buttons to start the Selftest. During the Selftest the same screens described in the *System Test* section of this manual are displayed.

```
DO QUIK SELFTESTING
PRESS ↓↑ TO CHANGE
```

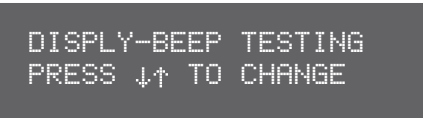
**DO RUNTIME CAL Screen**

This lets you manually initiate a **Runtime Calculation** test to calibrate the internal measurements which should result in more accurate runtime estimates. This only needs to be done once every 6 months, or if the load connected to the RLC-1080 changes significantly in size. Once initiated, the unit will operate on battery power until a low battery condition is reached.

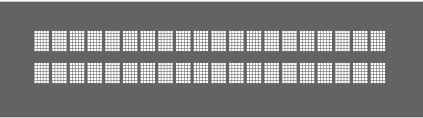


**DISPLY-BEEP TEST Screen**

This forces the RLC-1080 to perform **Display** and **Beep Tests**. Use the **Setup** button to advance to the **DISPLY-BEEP TEST** screen.



Then press either of the **Up/Down Arrow** buttons. This will cause all indicators and display fields to light, and an audible beep to sound.



**SCREEN SAVER: ON/OFF Screen**

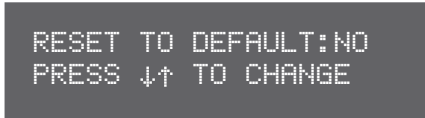
This lets you force the unit to alternate a message **RLC-1080 POWER CONDITIONER WITH BATTERY BACKUP** continuously between the two lines of fields of the VFD. This feature helps to maintain display appearance quality and enhances the longevity of the VFD.



**Note:** Even when the screen saver is set to 'ON', the screen saver message will display only when the system load is less than 5%.

**RESET TO DEFAULT: YES/NO Setting**

This lets you force the unit to reset all previous settings to the factory default values. Use the **Setup** button to advance to this screen, then press either of the **Up/Down Arrow** buttons. The system display will first show **INITIALIZING SETUP TO FACTORY DEFAULT** and then **INITIALIZATION COMPLETE** once the process is complete. The system then returns to the **RESET TO DEFAULT** screen.



**Setting Default Screen**

After one of the Status, Informational or Setup Screens have been displayed, the RLC-1080 display will revert to the **Source; EST RUN-TIME** screen. This happens about 30 seconds after the last time the **Status** or **Setup** button is pressed. You can set the RLC-1080 to display another of the screens as the "default" screen. To do so, repeatedly press the **Status** button until the desired screen is displayed. Then press and hold the **Status** button down until the screen displays "CURRENT SCREEN IS SAVED AS DEFAULT"

# Troubleshooting

The VFD screen will display any faults or warning conditions that occur along with a message explaining what action to take. If ever in doubt as to what action to take, please contact your authorised Rotel dealer or Rotel Technical Support at 800-370-3741.

**The RLC-1080 will not turn on**

**Possible Cause:** Battery is not connected.  
**Solution:** Remove front display panel by grasping the sides and pulling straight back. The battery is located on the right side of the unit. The black battery connector should be pushed firmly into the battery socket located just to the left of the battery pack. See the *Connecting the Battery* section of this manual to see a photograph.

**Possible Cause:** Input power cord is not connected properly.  
**Solution:** Be sure the power cord is properly connected on both ends.

**Possible Cause:** No power or insufficient power available at the wall outlet.  
**Solution:** Be sure the wall outlet is delivering the proper voltage by using a voltmeter. Or, if that is not possible, plug in a lamp to see if outlet has power. **Note:** The RLC-1080 will not turn on if voltage being supplied by the wall outlet is out of range. The unit can still be "cold-started" using battery power, by pressing and holding the power switch until the unit beeps.

**Possible Cause:** Circuit Breaker has tripped.  
**Solution:** Check the circuit breaker on the rear panel of the RLC-1080 and the circuit breaker in your home that controls the wall outlet the unit is connected to. If the circuit breaker located on the rear of the RLC-1080 has tripped, the center post will be extended outwards about 1/4 to 1/2 inch. Push it back in to reset it. If the circuit breaker trips again, unplug some of the equipment that is connected to the unit and try again. While the unit circuit breaker is rated for 15 Amps, the National Electric Code (NEC) dictates that any particular home circuit should not be loaded to more than 80% of its rating.

### Connected equipment reboots or turns off when the RLC-1080 switches to battery power.

**Possible Cause:** Battery was disconnected after unit was installed and powered on.

**Solution:** If the battery is disconnected a warning appears in the VFD display. Remove the front bezel by grasping the sides and pulling straight back. Check the battery connection to make sure that it is firmly pushed into its battery connector socket.

**Possible Cause:** Unit is overloaded.

**Solution:** If too much equipment is plugged into the RLC-1080 the amount of time the system can be powered while running on battery power is very short. Using the front display, you can see how much of the UPS load capacity is used. See the section of this manual titled *System Load*: <XXXW; Load: <XXX%. Additionally, there is an **Overload LED** on the front panel which will light 'red' if the unit is overloaded. If the unit is near overload or overloaded (>95%), the load should be reduced by unplugging one or more components.

**Possible Cause:** Battery charge level was low at the time the RLC-1080 switched to battery power.

**Solution:** Allow the RLC-1080 to fully recharge, by leaving the unit plugged in. It takes approximately 8 hours to recharge a discharged battery to 90% capacity.

**Possible Cause:** If the above problem remains unsolved....

**Solution:** Contact Rotel Technical Support at 800-370-3741.

### Replace Battery LED is illuminated.

**Possible Cause:** Battery is nearing the end of its useful life.

**Solution:** If it is more than two years from from the date of purchase, a Replacement Battery Cartridge (part# RBC63) can be ordered from your authorized Rotel dealer or Rotel Technical Support at techsupport@rotel.com or 800-370-3741.

## Limited Warranty

Rotel warrants this product to be free from defects in materials and workmanship for a period of two years from the date of purchase. Rotel's obligation under this warranty is limited to repairing or replacing, at its own sole option, any such defective products. To obtain service under warranty contact your authorized Rotel dealer or Rotel Technical Support at 800-370-3741.

If a product has to be returned for service you must include the following:

- Prepaid transportation charges
- Brief description of the problem encountered
- Proof of date and place of purchase

This warranty does not apply to equipment that has been damaged by accident, negligence, or misapplication or has been altered or modified in any way. This warranty applies only to the original purchaser who must have properly registered the product within 10 days of purchase.

EXCEPT AS PROVIDED HEREIN, ROTEL MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not permit limitation or exclusion of implied warranties; therefore, the aforesaid limitation(s) or exclusion(s) may not apply to the purchaser.

EXCEPT AS PROVIDED ABOVE, IN NO EVENT WILL ROTEL BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. Specifically Rotel is not liable for any costs, such as lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, costs of substitutes, claims by third parties, or otherwise.



# Specifications

## INPUT

<b>Voltage Range for Operation on Utility</b>	90V – 144V
<b>Nominal Voltage</b>	120 VAC
<b>Allowable Frequency for Operation on Utility</b>	47 – 63 Hz
<b>Rated Input Current</b>	12 Amps
<b>Circuit Breaker Rating</b>	15 Amps

## OUTPUT

<b>Number of Outlets</b>	12 (all outlets are surge protected, conditioned, regulated and battery backed up)
<b>Outlet Type</b>	NEMA 5-15R
<b>Rated VA Capacity</b>	1440 VA
<b>Rated Watt Capacity</b> (continuous)	900 Watts
<b>Rated Output Current</b>	12 Amps

## BATTERY BACKUP

<b>Transfer Time to Battery During Blackout</b>	7ms typical, 10ms maximum
<b>Battery Type/Quantity</b>	Four 12V/9A hr Sealed Lead-Acid, Maintenance Free
<b>Typical Recharge Time to 90% Capacity</b>	<8 hrs
<b>Battery Service</b>	User replaceable, Hot swappable
<b>Battery Life</b>	2-5 Years (Depending on use, environment, and temperature)
<b>Battery Runtime</b>	20 minutes (half load) or 7.5 minutes (full load) (Actual runtimes are determined by load, battery charge level, battery health and quantity of batteries installed)

## SURGE PROTECTION

<b>Let-Through Voltage Rating</b>	<40V
<b>Data Line Protection Jacks</b>	RJ45
<b>COAX</b>	3 pair + splitter
<b>Ethernet</b>	1 pair, 10/100bT
<b>Telephone/DSL</b>	2 line, 4 wire with splitter
<b>DC Trigger</b>	Two 3.5mm mini-jack plugs (5-30V)

## PHYSICAL

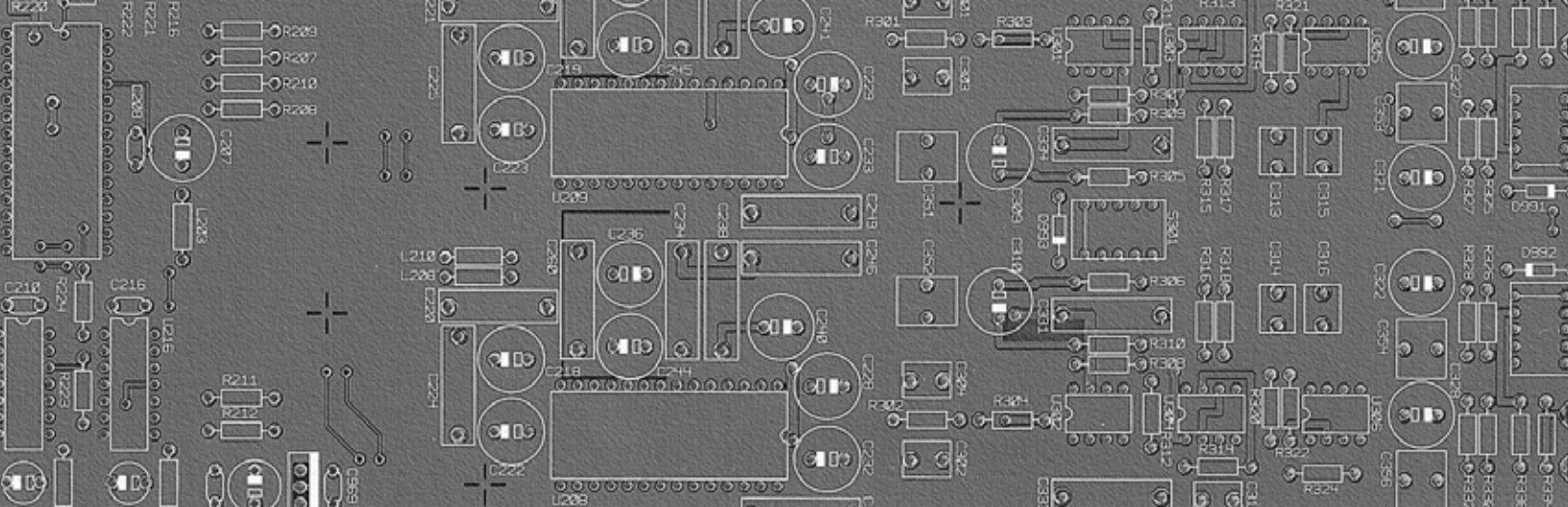
<b>Unit Dimensions</b>	17 x 5.25 x 18.55 in. 43.2 x 13 x 47.1 cm
<b>Unit Weight</b>	57 lbs / 26 kgs

## CONFORMANCE

<b>Safety Agency Approvals</b>	UL1778 (tested to relevant UL1449), CSA, FCC Part 68 Class B
<b>Warranty</b>	2 years

All specifications are accurate at the time of printing.  
Rotel reserves the right to make improvements without notice.





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